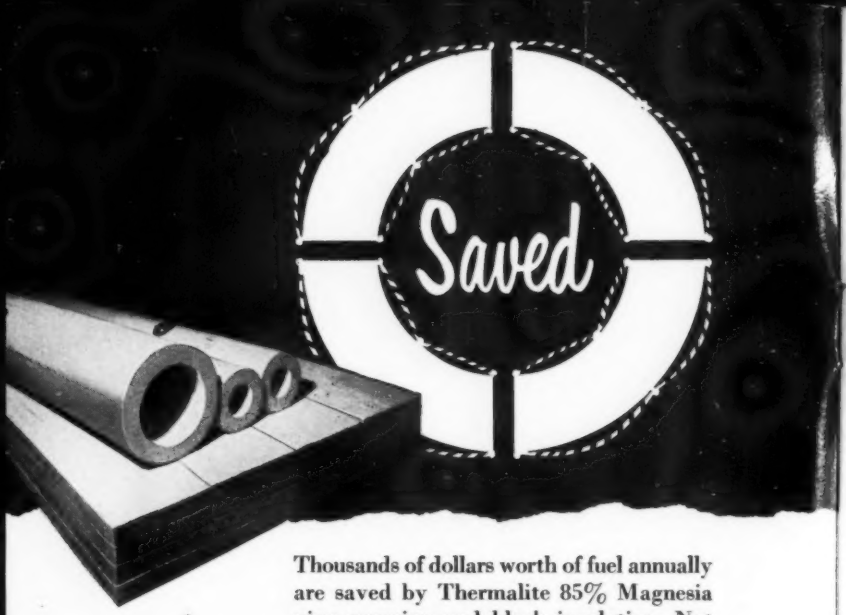
ASBESTOS

K & M Asbestos Textile Plant, Meredith, New Hampshire

JUNE 1953



Thousands of dollars worth of fuel annually are saved by Thermalite 85% Magnesia pipe covering and block insulation. Not only does Thermalite have an exceptionally low thermal conductivity, but it is molded to exact, finished size — making possible the tight joints and snug fits that are necessary for maximum heat saving.

Designed for temperatures up to 600 F., Thermalite is manufactured in sectional form for pipe sizes up to 18″ diameter. The hard, smooth surface and the light weight of Thermalite make it easy to handle, cut and apply.

For information on sizes, recommended thicknesses and recommended application procedure, write for Bulletin 4h.

SAVE HEAT WITH EHRET INSULATIONS

Ehret Magnesia Manufacturing Co.

VALLEY FORGE, PENNSYLVANIA

"ASBESTOS"

FOUNDED IN JULY 1919 AND PUBLISHED
MONTHLY SINCE THAT DATE

BY SECRETARIAL SERVICE
808 WESTERN SAVING FUND BLDG.
S. E. COR. BROAD & CHESTNUT STS.
PHILADELPHIA, 7, PENNSYLVANIA

Estate of C. J. STOVER, *Proprietor*

A. S. ROSSITER, *Editor* E. E. COX, *Circulation Manager*

Entered As Second Class Matter November 23, 1923, at the Post Office at Philadelphia, Pennsylvania, Under Act of March 3, 1879

Volume 34 JUNE 1953 Number 12

CONTENTS

ASBESTOS is indexed regularly by Engineering Index, Inc.

SUBSCRIPTION PRICE

United States - - - - - $2.00 Per Year
Canada - $3.00 Per Year Foreign Countries - $3.00 Per Year
Back Copies - .35 Each Single Copies - (Current) .25 Each
(Payable in U. S. Funds)

THE ARRAY TEST FOR ASBESTOS SPINNING FIBRE

By J. F. Kenny[1]

(Note: Mr. Kenny wishes it known that all credit for the development of this test method, and availability of the details, is due the Technical Consultant and the Physicist of the Laboratory concerned. However, any conclusions expressed are his own and not necessarily those of the Laboratory.)

The asbestos textile manufacturer is as much interested and concerned with quality improvement for his product as are other textile producers, but since he alone must use a natural, rather than a cultivated or synthetic fibre, product improvement becomes largely a matter of improved fibre selection. The cotton textile industry, while not harassed with supply shortages, nor unalterable fibres, is likewise concerned with the task of fibre selection, and thru years of extensive research has developed techniques and special mechanical devices to facilitate this work. One such device is the Suter-Webb Duplex Fibre Sorter, and the laboratory of one of our most progressive manufacturers of asbestos textiles is perhaps the first to adapt this particular device to the selection of asbestos fibres. After several years of painstaking work, coupled with extensive personal experience with asbestos fibres of all types, they have developed a modified version of the Suter-Webb Sorter, and a test procedure which is of very great value in the pre-determination of the relative spinning quality of any commercially graded asbestos fibre.

The standard Suter-Webb Duplex Fibre Sorter is an assembly of two banks of identical steel combs, teeth uppermost, mounted on a turntable. The modifications necessary for asbestos fibre work are confined to comb dimensions and spacing. Integral with the device is a release lever which permits each comb, in sequence, to be dropped sufficiently so that its teeth fall below the toothplane of the combs remaining in the bank. When one comb is dropped it exposes any fibre ends protruding thru the teeth of the comb behind it, permitting these fibres to be withdrawn with special tweezers. In addition to the

[1] Vice President—Arnhold & Company, Inc.

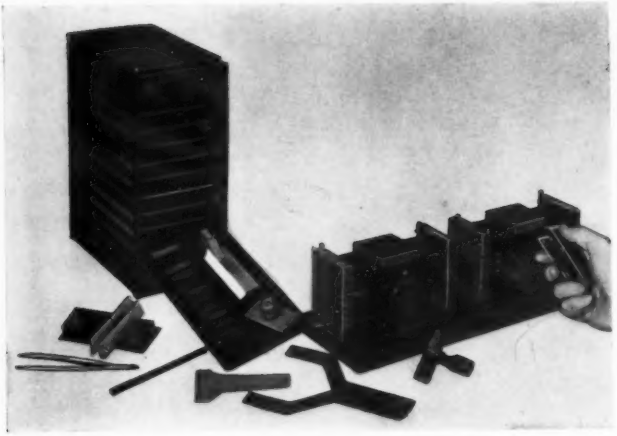


Photo by Alfred Suter Co.

Sorter, there is required an analytical or precision type balance, weighing to tenths of a milligram.

In general, the test procedure as carried out by the laboratory starts with a small bulk sample composited from random selections from the lot to be tested, which is successively reduced to a composite sample weighing 200 milligrams. This sample, handled with the tweezers, is 'combed-out' by drawing small tufts across the teeth of the combs in one of the banks, allowing whatever fibres are held in the teeth to remain in position, and continuing the process until the entire sample is placed in the combs. This initial arrangement is solely for the purpose of embedding all fibres in the comb teeth, as nearly parallel as possible.

The second step is accomplished by dropping individual combs in this bank, starting with the comb farthest from the operator, until some fibres protrude from the remainder of the bank; these fibres are then gripped with the tweezers and transferred 'en masse' to the second bank of combs, making certain when placing

the fibres in the teeth, that the face of the tweezers is against the outside edge of the first comb, thereby establishing a uniform protrusion of fibre ends in this second bank. The next succeeding comb in the first bank is then dropped, exposing additional fibre ends, which are transferred to the second bank in the same manner as the first group. Each group of fibres transferred is placed a little to the right or left of fibres already in position, so that upon completion of the operation the second bank should contain a parallel array, somewhat uniform in depth, with a uniform 'base-line' protrusion over the comb nearest the operator. This protrusion should approximate ⅛ inch, and the fibre length is measured from it.

For the third step, the comb bank is now turned around so that the longest fibres are pointing towards the operator, and combs which contain no fibre are dropped in sequence until the ends of the longest fibres are exposed ⅛ inch. At this point, the length of these fibres should be recorded, since all succeeding comb-drops will automatically indicate shorter fibres in ⅛ inch steps. The protruding fibres are now pulled out horizontally with the tweezers and weighed as a group, the weight being recorded against the measured length. This comb, now bare of ends, is dropped, exposing further fibre ends, which are likewise withdrawn and weighed as were the first group. Since the combs are spaced ⅛ inch apart these fibres will be ⅛ inch shorter than the first group. Continuation of this procedure will result in a tabulation of weights vs. lengths, the lengths differing uniformly in steps of ⅛ inch. There will probably be a slight difference between the sum of the individual weights and the original 200 milligrams, which difference can safely be added to the 'under ⅛ inch' group, as it really represents fibres too short to be held in the combs. The individual weights are now converted to percentages (percent of 200 mg) and the final tabulation will be an indication of the relative percentages of the staple lengths in the bulk lot from which the sample was taken. It should be stated here that when running a test upon a bulk delivery, many such samples are necessarily tested to insure the final figures being fairly representative for the lot.

The laboratory has supplied some typical figures obtained from tests upon three standard Canadian grades, 3-F, 3-K, and 3-R, which are tabulated here.

			Percent of fibre by length:							
Grade	Avg. Length	Over 1	7/8 to 1	3/4 to 7/8	5/8 to 3/4	1/2 to 5/8	3/8 to 1/2	1/4 to 3/8	1/8 to 1/4	Under 1/8
3-F	.235	0.9	0.3	1.0	3.3	4.8	12.8	15.8	18.3	42.8
3-K	.229	0.0	0.0	0.6	3.6	5.9	11.7	16.2	20.5	41.4
3-R	.208	0.2	0.6	0.9	2.2	3.8	8.0	14.0	27.3	43.2

These should be interpreted, not as a rigid specification, but as representative only. Both better and poorer figures have been encountered, and further, the laboratory cautions that,

> 'A 200 milligram test specimen is certainly apt to be variable from pinch to pinch' and
> 'The same grade from different suppliers is variable from time to time'.

It should also be mentioned that the 'average length' figures were derived from many tests, not from the specific percentages shown.

It will immediately be noted that this test will give a more intimate picture of the composition of any graded fibre than could be obtained from the Quebec Standard Test, which is made on a 16 ounce sample, mechanically shaken on an assembly of ½ inch, 4 mesh, and 10 mesh trays or sieves. The fibre array test data are particularly useful to spinners of high grade yarns, in that yarn faults appearing after spinning may be traced back to some deficiency in the relative proportion of staples; even before spinning, the data can aid in properly proportioning two or more bulk lots to produce a blend of optimum spinning quality.

From the spinner's point of view, it is interesting to compare the figures from the array test with the Standard Classification. For instance, taking the 3-F grade, the classification rating of 7-7-1.5-.5 would apparently indicate that 43.75% of the fibre was ½ inch plus, with an additional 43.75% between 3/16 and ½ inch. Actually, such is not the case, due to the large proportion of short fibre carried with the longer lengths. The Laboratory comments,

'The surprising disclosure is the high percentage of extremely short fibre entrapped and carried thru processing by the longer fibres. While there is some ground for doubting entire reliability, a large number of tests show a marked similarity. Array testing discloses the need for better and more realistic classification which would reduce losses in processing, save freight and handling costs, and improve the quality of textile products'.

As a matter of fact, any direct comparison between the two test methods is improper, since the classification is a system of commercial grading—and a very useful one —whereas the array test is somewhat in the nature of a precision determination of staple, applicable to a few selected grades only.

In connection with this tendency of long fibres to carry a high percentage of short fibre thru the processing stages, it seems obvious that a saturation point would be met with, beyond which satisfactory spinning results would be unobtainable. A highly saturated fibre, meaning one containing a high percentage of short lengths, is commonly exposed in processing—largely by high carding losses—but it would be desirable to determine this in advance of processing. The innate characteristics of different fibres vary somewhat with their origin, from which it might be inferred that some will safely carry thru processing a higher percentage of short fibre than others, and still produce a satisfactory yarn. It is a tribute to the ability and resourcefulness of the asbestos textile manufacturers that they succeed in processing some grades with a loss of only about half the short inclusions. Total elimination of such short fibre at the production mills would be disastrous, both in profitable mining and in yielding enough fibre to keep manufacturing plants in operation.

The array test offers the opportunity to determine in advance of processing, the relative value of this saturation factor, and to give some indication of the extent to which the grading—as established by the relative quantities retained on the first and second trays of the Quebec Standard Machine—is representative of fibres actually of the length assumed, or whether an unduly high percentage of entrapped short lengths is tending to produce an erroneous indication of spinning quality. Of course, the

only conclusive test of the spinning quality of a fibre is actually to spin it, but when working from a small sample this cannot be done. Under such circumstances, the array test will afford an excellent indication of possible 'yarn-yardage' per ton, which grade for grade, is the true value of any spinning fibre.

NPA ORDER M-96 REVOKED

All restrictions on the use of spinning grades of chrysotile asbestos fibre were removed by the National Production Authority, Department of Commerce on May 12, 1953, with the revocation of Order M-96.

This action is in line with the NPA policy of relaxing or removing controls whenever the supply situation appears sufficient.

The order was issued January 17, 1952, at a time when spinning grades of chrysotile asbestos fibre were decreasing in relation to requirements. NPA officials said preliminary tests on a new discovery of chysotile asbestos fibre in British Columbia now indicate the deposit may be of low iron content. Should developments prove this to be correct, it is believed adequate supplies would be assured for all essential uses.

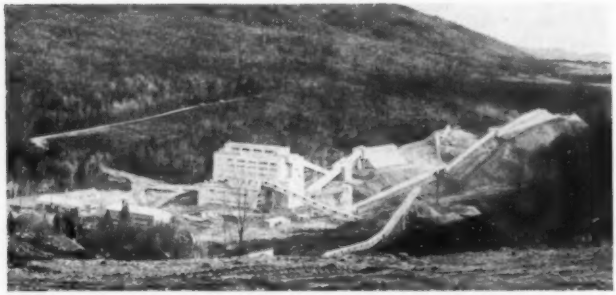
Chrysotile asbestos fibre is used in large quantities in production of textiles, moulded plastics, safety clothing, cable insulation, electrical tape, friction materials, and packing and gaskets.

A.S.H.V.E.

The American Society of Heating and Ventilating Engineers will hold its 1953 Semi-Annual Meeting in Denver, June 29, 30 and July 1, at the Shirley-Savoy Hotel. Fourteen papers will be presented at four technical sessions devoted to determination of heat and moisture transfer thru building materials, cooling tower performance, heat pump design and performance, effect of relative humidity on heat losses of individuals in various temperatures, and heat exchanges in floor panel heated rooms and heat flow analysis in panel heating and cooling sections.

THE RUBEROID ASBESTOS MINE IN VERMONT

The new operations of the Vermont Asbestos Mines, Division of The Ruberoid Co., at Lowell, Vermont account for 96% of the Chrysotile asbestos produced in this country.



While the United States must still import the great percentage of its asbestos requirements from Canada, as it has in the past, the grades of fibre produced at Vermont are comparable to the Candian fibre and the operations present an interesting cross section of asbestos mining and milling procedures.

Deposits of chrysotile asbestos being worked are located on the Southeast slope of Belvidere mountain in North Central Vermont, 20 miles south of the Canadian border. The serpentine masses are similar to those in Quebec, altho 75 miles Southwest, and are peridotites intruded in the post Ordovician period.

The original Ruberoid plant and workings acquired in 1936 were located near the top of Belvidere Mountain, but a search was begun some years ago to locate larger deposits of high grade ore. New deposits were found and in 1948, after a long test mining period, plans for the new mills were begun.

Prior to the construction of the new mill, a 5,000-ft.

aerial tramway was built to carry the ore 1,000 ft. upward to the original mill. When it became certain that the new deposits were of sufficient quantity and quality, the new plant was constructed.

The mill went into limited production on August 31, 1949 and when full production was obtained, the old one shut down.

The plant was designed by the company's staff for maximum flexibility, with provisions for bypassing any machine in case of trouble, and with sufficient excess capacity so that it could be done without affecting output or quality of production.

By analyzing methods practiced in the old mill and by a certain study of Canadian operations, Ruberoid engineers succeeded in incorporating many successful innovations which have made it the most modern mill in the world. Some of these are:

1. The use of high faces and large blasts, which has proved to be highly economical.
2. Collecting wet dust from the driers.
3. Outdoor stockpiling of undried ore, permitting plant operation in any weather.
4. Centralizing all milling from the third stage on in one building.
5. Remote control of mill feed.
6. Eliminating bucket elevators.
7. Controlling mill temperature. (The temperature in zero weather is kept between 60° to 70° F.)
8. Using variable-speed motors in graders.
9. Removing wood from mill flow by wet classifiers.
10. Utililizing automatic sequence starting and stopping.

Asbestos fibres are removed by suction (aspirated) from oscillating sloped tables which are operated at slow speed to bring the fibre to the surface. The first series of hoods has sufficient capacity to handle surges in case any one or several machines go out of operation. The fines and rock powder are screened out of the fibre by Rotex or Simplex-type screens which have a flat circular motion at their feed ends and a fore and aft shaking motion at their discharge ends. Rubber balls bouncing under the screen cloth

keep it from blinding. The three successive stages of screening and air cleaning used in this plant result in a clean fibre.

The Ruberoid fiberizing mills throw the rock and hard fibre against breaker plates in a high-velocity downcurrent of air, which sweeps away the free fibre. The impact mills have swing hammers which hit the fibre and rock when falling thru the machine. A vertical screen is used for removing fine sand from the fibres.

Of particular significance to the industry is the fact that Ruberoid is perfecting a compression packer which will compress the fibre about 50%, to a weight of 50 to 60 lbs. per cu. ft. packaging will be in fibre bags and the rectangular shape of finished packages will make it much easier to store, thus increasing warehouse capacity. The new, nearly perfected bag packing method has long been needed and marks a long step forward in packaging efficiency.

The bagged material can be fluffed by mild fiberizing action in a fan or by some other means, a procedure which most large users of the product are already equipped for.

Ruberoid's new operation, modern in every sense of the word, houses a complete laboratory, which is thoroughly equipped for making all necessary tests, including fibre control and core analysis. The entire operation is under the supervision of M. J. Messel. Morgan Potter, assistant superintendent, is in charge of mining operations. I. E. Matthews is plant maintenance engineer and Carl White is mill superintendent.

THERMAL INSULATION SOCIETY

Mr. Ray Thomas, President of the Thermal Insulation Society, recently addressed groups of Industrial Engineers, at meetings held in San Francisco and Los Angeles, in the interest of the Society, with the idea that these meetings would result in the forming of Chapters of the Society in the two cities.

The Society now consists of four separate chapters and it is the hope of the President that just as soon as at least five chapters have been formed that a national organization may be effected. It is further hoped that such an organization will be realized during the current year.

A great deal of interest was shown at both of the above mentioned meetings and it is the feeling that other chapters will be forthcoming from other locations in the not too distant future because of interest displayed in the form of inquiries frequently received from widely scattered areas.

It is felt that this organization will eventually fulfill a need in industry not now provided by any current group and that thru this organization a much better understanding will eventually exist since it has been formed for the purpose of disseminating valid information which can only result in education of all concerned with its attendant improvement of the industry.

A number of projects are now in progress, such as specifications for the guidance of engineers and buyers, recommendations to manufacturers for more informative catalogs and guides for architects and builders interested in the building insulation field.

BUILDING

The construction boom broadened its base in April, for aiming at a 1953 total equalling or exceeding the all-time high of 1952.

The F. W. Dodge Corporation total of Dodge Reports of contracts awarded in the 37 eastern states for the first four months slipped 1 per cent below the total for the first quarter, but on the other hand another month went by.

The four-month Dodge total of $5,186,238,000 is 10 per cent above the corresponding total for 1952. The three-month total was 11 per cent above 1952.

It may be noted that if the Dodge total should slip the same amount in each of the remaining eight months, 1953 would still be ahead of 1952 at the end of the year.

Non residential was the strongest classification of Dodge Reports in April. The total was $680,330,000, up 51 per cent over March and up 21 per cent over April 1952. Residential award reports totalled $673,887,000, up 11 per cent above March but 1 per cent behind April 1952. Heavy engineering and public works and utilities totals were $378,325,000, up 32 per cent over March and up 10 per cent over April 1952.

The grand total of Dodge Reports in April was $1,741,542,000, up 29 per cent over March and up 9 per cent over April 1952.

All categories showed gains for the four months: Nonresidential, $1,910,740,000, up 13 per cent; residential, $2,157,691.000, up 7 per cent; heavy engineering, $1,117,-807,000, up 10 per cent as compared with the first four months of 1952.

MARKET CONDITIONS

GENERAL BUSINESS.

Business in general continues quite good. The firming of interest rates and the scarcity of money to lend on the part of banks indicate at least, a temporary halt to the inflationary trend of the past. There are numerous indications that we may well expect a let-down of, at least, minor proportions during the latter half of this year or early 1954. However, most informed opinion looks for nothing serious in this respect within the forseeable future.

ASBESTOS — RAW MATERIAL.

During April a noticable pick-up took place in both production and shipment of all grades and is continuing in May. There are only a few spots where supply is appreciable in excess of demand and the gap appears to be lessening as we get into the second quarter.

ASBESTOS — MANUFACTURED GOODS.

Asbestos Textiles. There is a definite recession in demand for all asbestos textiles with the possible exception of 10-cut cloth. Orders for fine cut cloth are literally nonexistant. Furthermore, tape is in very light demand.

It appears that if the electrical industry resumes buying tape, business will improve somewhat, but no possibilities of substantial improvement in fine cut cloth is seen.

Asbestos Brake Lining. The market is still firm on automobile products, but the regular summer dip is expected to begin in a short while. According to the Automobile Industry they are expecting to break the record for car production and if this prediction is correct the accessory manufacturers can look for a good year.

Asbestos Paper. The demand has increased due partly to purchasers taking advantage of protection privileges. Business should continue on an even basis after some leveling off following completion of protection order shipments. The *Millboard* market is about the same as the Paper mar-

CANADIAN ASBESTOS FIBERS

THE NICOLET MINE
Norbestos (via Warwick)
Que.

Address Inquiries to:

NICOLET ASBESTOS MINES LIMITED INC.*

70 Pine Street

New York 5, New York

**One of the NICOLET Industries*

ket. The demand for *Saturated Paper* is good and is expected to continue.

Insulation. High Pressure. Business is better and much improved over April, altho production is still above demand and immediate shipments are possible at this time. This is expected to continue and an appreciable backlog is looked for by November.

Insulation. Low Pressure. The demand for low pressure is higher than for the same period last year. With the development of more and more housing projects, the demand should continue heavy.

Asbestos Cement Products. Order replacements for siding has slowed somewhat due to inelement weather; business for May is expected to be below the same period last year.

There is a seasonable improvement in the market for corrugated and flat and it is expected to continue.

There is no slackening in the demand for Pressure and Sewer pipe and Electrical Conduit sales continue good.

The above comments have been made by various informed executives in the Industry. All comments are welcome.

. . . —

Smith & Kanzler Corp., Linden, New Jersey, have added a "SPRAYBEST" division for spray-gun applied asbestos fibre, for fireproofing, insulation, condensation control and noise isolation. W. A. Burnham, who has been associated, for a number of years, with the development and improvement of gun-applied fibres, has been appointed general manager.

Imports into U. S. A.

(Figures by Bureau of Census)

Unmanufactured Asbestos—By Countries:

	February 1953 Tons (2240 lbs.)
From Canada	48,483
Union of S. Africa	1,844
Southern Rhodesia	689
U. S. S. R.	193
Australia	49
Bolivia	49
Other Countries	27
	51,334
Valued at	$4,990,176

By Grades:

Crude No. 1, Chrysotile, Canada	32
Crude No. 2, Chrysotile, Canada	18
Crude No. 2, Chrysotile, S. Rhodesia	90
Crude, Other, Chrysotile, U.S.S.R.	96
Crude, Other Chrysotile, S. Rhodesia	94
Crude, Other, Chrysotile, Other Countries	24
Crude, Blue, Bolivia	49
Crude, Blue Australia	49
Crude. Blue, U. of S. Africa	820
Crude, Amosite, Union of S. Africa	782
Textile Fibres, Chrysotile, Canada	1,793
Textile Fibres, Chrysotile, So. Rhodesia	505
Textile Fibres, Chrysotile, U. of S. Africa	90
Textile Fibres, Chrysotile, Other Countries	1
Shingle Fibres, Chrysotile, Canada	6,677
Shingle Fibres, Chrysotile, Other Countries	2
Paper Fibres, Chrysotile, Canada	5,042
Paper Fibres, Chrysotile, U.S.S.R.	97
Other Fibres, Chrysotile, Canada	34,921
Other Fibres, Chrysotile, U. of S. Africa	152
	51,334

	February 1953 Quantity (lbs.)	Value
Manufactured Asbestos Goods:		
Asbestos Yarn	7,423	6,651

Asbestos Packing—Fabric	5,405	5,699
Asbestos Packing—Not Fabric	1,115	736
Asbestos Woven Fabric, Other, Canada	28,960	46,844
Asbestos Woven Fabric, Other	3,169	2,852
Asbestos Brake Lining (Mld.) Canada	12,756	20,036
Asbestos Cement Products (Impreg.)	922	154
Asbestos Cement Products (Not Impreg.) Italy	225,530	11,858
Asbestos Cement Products (Not Impreg.)	4,512	303
Asbestos Shingles (Not Impreg.)	413	25
Asbestos Manufacturers—others	....	986
	290,205	$96,144

Exports from U. S. A.

(Figures by Bureau of Census)

Unmanufactured Asbestos:

	February 1953	
	Tons (2240 lbs.)	Value
To Europe	284	$ 77,015
S. America	135	24,620
Other Countries	38	11,971
	457	$113,606

Manufactured Asbestos Goods:

	February 1953		
		Quantity	Value
Asbestos Pipe Covg. & Cement	Lbs.	229,879	$ 17,242
Asbestos Textiles & Yarns	Lbs.	19,940	27,087
Asbestos Packing	Lbs.	88,556	107,035
Asbestos Bk. Lng. (Mld.&S.Mld.)	Lbs.	298,327	287,480
Asbestos Bk. Lng. (Woven)	Lin. Ft.	23,860	24,880
Asbestos Clutch Facings	No.	80,007	48,149
Asbestos Brake Blocks	Lbs.	25,743	30,560
Asbestos Construction Materials	Lbs.	2,773,752	218,178
Asbestos Manufacturers—Others	Lbs.	....	28,795
			$789,406

Exports from U. S. A.

(Figures by Bureau of Census)

Unmanufactured Asbestos:

	Year 1952 Tons (2240 lbs.)	Value
To Europe	4,567	$1,311,279
South America	2,128	572,745
Canada	160	35,242
Central America & Mexico	38	5,704
United Kingdom	22	2,581
Other Countries	2,251	622,514
	9,166	$2,550,065

Manufactured Asbestos Goods:

	Year 1952 Quantity	Value
Asbestos Pipe Covg. & Cement	Lbs. 4,648,194	$ 655,254
Asbestos Textiles & Yarn	Lbs. 669,737	613,492
Asbestos Packing	Lbs. 1,837,862	1,814,631
Asbestos Bk. Lng. (Mld.&S. Mld.)	Lbs. 4,729,352	4,657,696
Asbestos Bk. Lng. (Woven)	Lin. Ft. 530,906	424,838
Asbestos Clutch Facings	No. 1,550,644	996,080
Asbestos Brake Blocks	Lbs. 389,108	454,537
Asbestos Construction Materials	Lbs. 33,384,471	2,822,802
Asbestos Manufactures—Others		588,409
		$13,027,739

Imports of Asbestos by United Kingdom

Raw Materials

	March 1953 Tons (2240 lbs.)
From Union of South Africa	2,006
Southern Rhodesia	3,085
Basutoland, Bechuanaland & Swaziland	1,049
Canada	2,769
Other Commonwealth Countries and the Irish Republic	10
Foreign Countries	3
	8,922

These figures were supplied by the Mining Journal Limited of London.

Exports from Canada

(Published by Dominion Bureau of Statistics)

	February 1953 Tons (2000 lbs.)	Value
Unmanufactured Asbestos:		
Crude		
United States	25	$ 29,341
United Kingdom	....	....
South America	....	....
Central America & Mexico	...	....
European Countries	....	....
Other Countries	....	....
	25	$ 29,341
Milled		
United States	15,320	$2,607,332
United Kingdom	471	84,862
South America	1,083	182,533
Central America & Mexico	310	46,730
European Countries	2,970	532,939
Other Countries	2,604	413,134
	22,758	$3,867,530
Shorts		
United States	36,728	$1,761,023
United Kingdom	1,345	52,643
South America	30	2,340
Central America & Mexico	....	....
European Countries	1,908	129,337
Other Countries	461	35,469
	40,472	$1,980,812
Grand Total—Unmanufactured Asbestos	63,255	$5,877,683
Manufactured Asbestos Goods:		
Brake Lining		$ 10,396
Packing		594
Other Materials		6,772
		$ 17,762

PABCO PRODUCTS INC.

Quarterly Report

The report of Pabco for the three months ending March 31, 1953, shows Net Sales of $8,185,849 compared with $8,228,741 for the corresponding period in 1952; Net Profit for the period was $144,783 compared with $156,436 for 1952, or 8c per share for the 1953 period and 9c per share for 1952, after provisions for Preferred Dividends.

Canada

(Department of Mines, Province of Quebec)

Tons 2000 lbs.

Production for March 1953	73,192
Compared with March 1952	70,540

Dominion Production for March 1953 is 75,233 tons, a difference of 2,041 tons from the Quebec figure.

Africa (Rhodesia)

(Published by Rhodesia Chamber of Commerce)

Tons 2000 lbs.

Production for January 1953	7,223.09 tons
Valued at	£599,573
Production for January 1952	5,845.06 tons
Valued at	£460,740

Africa (Swaziland)

Production for April 1953	2,350 tons

Cyprus

(From W. Parry James, A.C.S.M., Inspector of Mines)

	1st Quarter (ending March 31, 1952)		
	January	February	March
Rock Mined	....	120	195
Rock Treated	812	101	138
Fibre Produced	91	21	48
Fibre Exported	267	....	5

MINING JOURNAL ANNUAL REVIEW NUMBER

The annual review number of the Mining Journal published in London (at 15 Wilson Street, Moorgate, London, E.C. 2) was issued in May and contained 256 pages. Many special contributed articles, repoprting on the mining industry thruout the world during 1952 are among its contents. The contents can be roughly grouped as Metals, Mining and Metallurgical Developments, and a Review of the Year covering the various mining fields.

• • • —

The happiness of your life depends upon the quality of your thoughts.

NEWS OF THE INDUSTRY

BIRTHDAYS

E. B. Poulin, Sec'y.-Treas., Asbestonos Corpn. Ltd.(St. Lambert, Montreal, P.Q., Canada, June 20.

Kenneth Gray, Director, The Cape Asbestos Co., Ltd., 114-116 Park St., London W. 1, England, June 21.

L. R. Leaver, Vice President, Thermoid Company, Trenton, N.J., June 21.

Harold W. Donnelly, Vice President, Norristown Magnesia & Asbestos Co., Norristown, Pa., June 22.

C. A. Schell, Vice President, Thermoid Company, Trenton, N.J., June 22.

E. M. Bollaert, Vice President, Pacific Asbestos-Cement Products Corp., San Bernardino, Calif., June 25.

A. F. Moore, retired Manager, Asbestos Department, The Philip Carey Mfg. Co., Cincinnati, Ohio, June 26.

Walter G. Cowan, Vice President & General Manager of Manufacture, The Ruberoid Co., New York City, June 26.

H. A. King, Manager, Asbestos Fibre Sales, The Ruberoid Co., New York City, June 28.

L. B. Palmer-Ball, President, Palmer Asbestos Company, Louisville, Ky., June 29.

Ernest A. Beldam, Director Beldam Asbestos Co., Ltd., Hounslow, England, June 30.

Vincent W. Hemphill, Secy., Standard Asbestos Mfg. Co., Chicago, Ill., July 1.

S. F. Breuleux, Treasurer, The Philip Carey Mfg. Co., Cincinnati, Ohio, July 6.

Charles S. Wood, Treasurer, Chas. S. Wood & Co., Newark, N.J., July 6.

C. L. Hoshaw, Mgr. Construction Division, The Philip Carey Mfg. Co., Cincinnati, Ohio, July 7.

G. K. McKenzie, Secretary, The Flintkote Co., New York City, July 7..

Capt. W. A. Janitch, R. E. Representative in Great Britain for Asbestos Corporation Ltd., London, England, July 10.

A. M. Ehret, Jr., President, Ehret Magnesia Mfg. Company, Valley Forge, Pa., July 11.

H. W. Prentis, Jr., Chairman, Armstrong Cork Co., Lancaster, Pa., July 11.

Irving McCormick, President, The McCormick Asbestos Co., Baltimore, Md., June 13.

Alfred Carr, Oldest Living Pipe Coverer, San Francisco, Calif., July 14.

We extend congratulations and best wishes to all these gentlemen on the occasion of their birthdays.

UNION ASBESTOS & RUBBER CO.

First Quarter Report

Union Asbestos & Rubber Company, has issued its report for the first quarter ending March 31, 1953. Detailed figures follow. with comparison figures for 1952.

	1953	1952
Earned per Share	$ .15	$ .26
Net Sales	$2,810,588	$3,302,624
Income Before Federal Income Tax	145,751	265,759
Income Tax Provision	75,790	138,195
Net Profit	69,961	127,564
Number of Shares (Less Treasury Stock)	475,176	475,176

THE FLINTKOTE COMPANY

Curtis W. Wells has recently been transferred from Flintkote's Detroit district sales office and has been assigned a sales territory which includes southeastern Ohio and northern West Virginia.

A graduate of Drake University, Mr. Wells has had a well-rounded background in sales administration in both the Chicago Heights and Detroit offices of The Flintkote Company prior to his present assignment.

THE THERMAL INSULATION COMPANY

The Thermal Insulation Company of New Haven, Conn., has announced that *Henry G. Schneider* is now associated with their firm. Mr. Schneider's long experience in the field of insulation is again available to aid with insulation requirements.

ASBESTOS CORPORATION LIMITED

Asbestos Corporation Limited, Thetford Mines, Quebec, Canada, has been granted a permit to build an asbestos processing plant in the Coleraine-Black Lake area of Quebec's eastern townships. The company also plans to spend approximately $10,000,000 for the development of an asbestos mine in the area.

A.S.T.M. 50-YEAR INDEX

American Society for Testing Materials has issued a "50-Year Index to A.S.T.M. Technical Papers and Reports." The publication provides a detailed author and subject index to all A.S.T.M. reports dealing with materials, particularly their properties and testing, appearing in A.S.T.M. publications covering the period from 1898 thru 1950. The index is concerned basically with technical papers which have appeared in proceedings, A.S.T.M. Bulletin, special technical publications, or special compilations of standards.

Copies of this 216-page, cloth-bound publication can be procured from A.S.T.M. Headquarters, 1916 Race St., Philadelphia, 3, Pa., for $6.00 per copy.

JOHNS-MANVILLE CORPORATION
Annual Meeting

A note of optimism tempered with caution on the immediate economic outlook for the country and for Johns-Manville was sounded by L. M. Cassidy, Chairman of the Board, who presided at the annual meeting of the company's stockholders held on May 9th, 1953, while A. R. Fisher, President, reviewed the company's operations for the past ten years and described some of the major projects in J-M's $103 million post-World War II expansion, cost reduction and improvement program.

Mr. Cassidy stated that the world demand for asbestos fibre is dropping, due primarily to the fact that European companies stocked supplies of fibre well in advance of their requirements and have ample stocks for the present and that some of John's Manville's competitors have expanded their facilities for producing fibre.

It is felt, however, that the drop in world demand for asbestos fibre is only temporary and will right itself within a relatively short period.

The steps the company has taken since the end of World War II to help maintain its leadership in an "increasingly competitive market" were described to the stockholders by A. R. Fisher.

As part of Johns-Manville's overall program to increase sales, the company has for the last six years conducted an intensive sales training course to prepare new salesmen to give improved service to customers and the public and, at all times, a wide variety of advertising media is employed to inform the public about the company and its products.

Mr. Fisher told the stockholders that Johns-Manville was committed to a policy of growth and expansion and that the company gives top priority to "those projects offering the best profit possibilities for the immediate future."

Mr. Fisher concluded his review by showing slides of the major projects in the company's post-World War II $103 million expansion, improvement and cost reduction program. He said that $45 million had been spent to build new plants and acquire existing plants; $22 million had been spent for new and improved products in the J M lines; cost reduction projects totalled $14 million; replacements accounted for $15 million; and $7 million was spent on safety and improved working conditions in J-M plants and mines.

The eleven Johns-Manville directors were re-elected.

A. S. T. M. COMMITTEE C-17—Asbestos Cement Products

During the Detroit meetings of Committee C-17 on Asbestos Cement Products, as part of A.S.T.M. Committee Week, the Subcommittee on Methods of Test spent much time in evaluating the methods of test that are incorporated in the proposed revisions of the current specifications and in writing the statements covering the significance of these tests. It is currently studying test methods that can determine handleability of asbestos-cement pro-

ducts and also searching for a way to test for organic material in these products.

The problem confronting Subcommittee on Specifications has been to arrive at proper values for asbestos-cement products after new test procedures have been established. Agreements were reached and are being incorporated in the revised proposals.

The Chairman of the Committee is David Wolochow.

DIRECTOR OF ASHVE RESEARCH
Dies Suddenly

Members of The American Society of Heating and Ventilating Engineers were greatly shocked to learn that *Cyril Tasker*, Director of the Society's Research Laboratory, died suddenly on May 27. Mr. Tasker had attended a meeting of the I-B-R held at Absecon, N. J. and was en route home when he succumbed to a heart attack in Warren, Ohio.

Mr. Tasker was born in Manchester, England and was graduated from the University of Manchester in 1923 with the degree of M. Sc. (Tech). Until 1930, when he came to Canada, he was on the staff of the British Fuel Research Board. He became a member of the Society in 1935 and had served as a member of the Committee on Research, and of the following Technical Advisory Committees from 1936 until 1943: Fuels, Insulation, Physiological Reactions, Air Conditioning in the Industry, and Sensations of Comfort. He was elected to Council in 1941 and resigned upon receiving the appointment as research director.

UNITED STATES RUBBER COMPANY
New Assignments

Major changes in management assignments in the Textile Division of United States Rubber Company and the addition of two new branch offices in Philadelphia and Atlanta were recently announced.

R. A. All, who has been in charge of industrial relations and labor standards for the division for the past eight years, will become assistant to the merchandise manager. Mr. All joined U. S. Rubber in 1937 at the Hogansville, Ga., plant and was transferred to Winnsboro, S. C., in 1938 and to the general offices in New York in 1944.

Joseph F. Hartman has been appointed consumer fabrics sales representative for the Philadelphia and Baltimore areas, with headquarters in the Textile Division's new office located at the U. S. Rubber branch in Philadelphia. Mr. Hartman, who has been affiliated with the Textile business for 13 years, will handle the sale of U. S. Royal fabrics in eastern Pennsylvania, southern New Jersey, Delaware and Maryland.

C. F. Cline, Jr., will be consumer fabrics sales representative for the southeastern states, with headquarters at the company's branch in Atlanta. Mr. Cline has been with U. S. Rubber for 17 years, with positions at company plants in Winnsboro, S. C., Shelbyville, Tenn., Passaic, N. J., and New Bedford, Mass. He will handle consumer fabrics sales in North Carolina, South Carolina, Georgia, Alabama and Florida.

STABILITY OF CHRYSOTILE ASBESTOS

By Bartholomew Nagy and THOMAS F. BATES

The article "Stability of Chrysotile Asbestos" describes recent investigations conducted on the serpentine group which possesses the general chemical formula $3MgO \cdot 2SiO_2 \cdot 2H_2O$ and the kaolinite type crystal structure. The studies have shown that chrysotile has the lowest chemical and thermal stability of the group.

A limited supply of reprints are available to interested persons by writing, Thomas F. Bates, Associate Professor of Mineralogy, The Pennsylvania State College, State College, Pa.

ASBESTOS STOCK QUOTATIONS

(These figures are compiled from the Commercial & Financial Chronicle. No guarantee as to their correctness.)

		May 1953		
	Par	Low	High	Last
Amer. Br. Shoe (Com)	np	37¾	39	38¾
Amer. Br. Shoe (Pfd)	100	97½	100	97¾
Armst. Ck. (Com)	np	53	55½	55¼
Armst. Ck. (Pfd.)	np	91½	93½	92¾
Armst. Ck. (Conv. Pfd)	np	108¼	112¾	110
Asb. Corp. (Com)	np	24¾	26	25
Carey (Com)	10	18¼	19⅜	18⅜
Cassiar Asb. Corp.	np	$7.10	$7.85	$7.45
Celotex (Com)	np	17⅝	18¼	17¾
Celotex (Pfd)	20	16⅛	16⅞	16⅞
Certainteed (Com)	1	14⅛	14¾	14⅛
Dominion Asb. Mines	1	$2.75	$3.70	$3.45
Flintkote (Com)	np	29⅛	30⅞	29⅛
Flintkote (Pfd)	np	97	98	98
Johns-Manville (Com)	np	62⅜	66¼	63
Pabco Products (Com)	np	12	13	12¼
Pabco Products (Pfd)	100	86	86½	86
Ray-Man (Com)	np	42½	43¼	43
Ruberoid (Com)	np	59	61	60⅜
Thermoid (Com)	1	7⅝	8⅛	8
Thermoid (Pfd)	50	40¾	41¾	41
Union Asb. & Rub. (Com)	5	12	12⅞	12⅜
United Asb. (Com)	1	$3.55	$3.75	$3.65
U. S. Gypsum (Com)	20	109¾	113¼	109¾
U. S. Gypsum (Pfd)	100	162	165	163¼
U. S. Rubber (Com)	5	26¼	29¾	26⅝
U. S. Rubber (Pfd)	100	132¾	139	133¼

AUTOMOBILE SALES

	April 1953
Passenger Cars	596,633
Motor Trucks	126,788
Motor Coaches	145
	723,566

In April 1952, a total of 415,357 motor vehicles were sold. In the four months of 1953 the total was 2,572,424.

These figures were supplied by the Automobile Manufacturers Association, New Center Building, Detroit, Michigan.

CURRENT RANGE OF PRICE

June 10, 1953

Arizona—	Per Ton of 2,000 lbs., f.o.b. Globe, Arizona	
No. 1 Crude	$1,200.00 to	$1,500.00
No. 2 Crude	900.00 to	1,000.00
No. 3 Crude	375.00 to	450.00
Filter Fibre	425.00 to	450.00
Canada—	Per Ton (2000 lbs.) f.o.b. Mine	
Group No. 1 (Crude No. 1)	$1,100.00 to	$1,500.00
Group No. 2 Crude No. 2; Crude Run-of-Mine and Sundry	500.00 to	1,000.00
Group No. 3 (Spinning Fibre)	300.00 to	525.00
Group No. 4 (Shingle Fibre)	150.00 to	200.00
Group No. 5 (Paper Fibre)	100.00 to	140.00
Group No. 6 (Waste, Stucco or Plaster)		77.00
Group No. 7 (Refuse or Shorts)	35.00 to	70.00
Vermont—	Per Ton of 2000 lbs. f.o.b. Hyde Park or Morrisville, Vt.	
Group No. 3 (Spinning & Filtering)	$ 321.00 to	$ 348.00
Group No. 4 (Shingle Fibre)	156.00 to	173.00
Group No. 5 (Paper Fibre)	110.00 to	132.00
Group No. 6 (Waste, Stucco or Plaster)		78.00
Group No. 7 (Refuse or Shorts)	37.00 to	68.50

THE TWELVE ESTIMATING TABLES

The Twelve Estimating Tables, with Chart, convenient in figuring flange fittings and other areas, is $1.00 per set.

These tables have been found very useful by estimators in figuring areas, but since we have not for some time published the detailed list, it occurred to us that many would like to know exactly what the tables cover, and order them before the fall work begins. Following is the list.

Sq. Ft. Areas of Pipe Covering.

Mean Sq. Ft. Areas Standard Screwed Fittings.

Mean Area Standard Weight Flanged Fittings.

Standard Weight Flange Areas, Permanent Type.

Standard Weight Flange Areas, Removable Type.

Figuring Hair Felt, 1", 1½", 2".

Anti-Frost Insulation.

Cork Pipe Covering, Outside Area in Sq. Ft.

Ice Water Thick Cork Moulded Fittings Screwed, Outside Area in Sq. Ft.

Brine Thickness Cork Moulded Fittings. Screwed, Outside Area in Sq. Ft.

Special Thickness Cork Moulded Fittings, Screwed, Outside Area in Sq. Ft.

Dusts and Flue Perimeters.

The chart gives an easy way to figure Curved Cylindrical Surfaces.

The tables are printed on paper which will wear well under handling. Orders can be filled immediately upon receipt, write Asbestos.

AFTERTHOUGHTS

¶ Fuel savings up to 30 percent in wintertime and temperature reductions of as much as 15° in summertime can both be accomplished with The Ruberoid Co.'s new REFLECTIVE INSULATION just placed on the market. Made of a high-reflectance aluminum foil bonded to a tough kraft paper, REFLECTIVE INSULATION not only reflects up to 95 percent of the radiant heat rays that strike it but also acts as an effective vapor barrier against the passage of moisture. It is now being distributed by The Ruberoid Co. thru its national-wide organization of 20,000 dealers and building supply distributors.

. . . —

¶ Asbestos Pre-Fab Canal Liner is a new Johns-Manville product that protects against water seepage from irrigation systems, stock ponds and reservoirs. Developed in cooperation with irrigation engineers, it is made of asbestos and asphalt and will not rot or decay underground.

Detailed information is available in a fully illustrated, twelve-page brochure. For copies of "Asbestos Pre-Fab Canal Liner", write to Johns-Manville, 22 E. 40th Street, New York 16, N. Y.

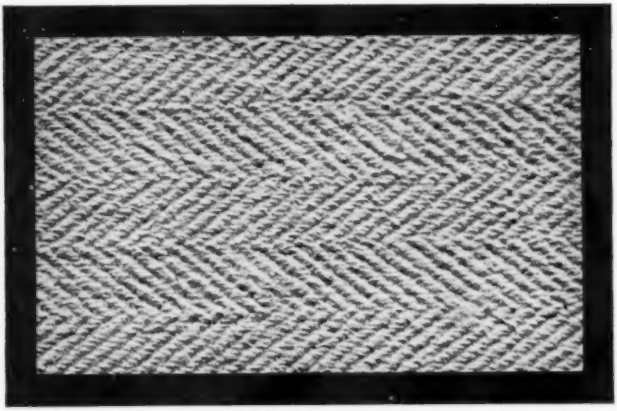
. . . —

¶ "Figure-fact efficiency for Contractors and Builders" is the subject of a folder on the use of the Printing Calculator, released by Remington Rand Inc.

Use of the Printing Calculator assures top figuring speed for estimating, figuring costs, payroll computations, insurance records, extension of bills, tax computations, etc. Remington Rand calls the booklet No. AD535.

. . . —

It takes a lot of thought, a lot of effort, and dogged determination to be persistently disagreeable.



A Unique, Lightweight, Herringbone Asbestos Cloth

R/M No. 24H120 Underwriters' grade herringbone cloth is designed to provide protection and ease of action to employees in hazardous industries. Its weight of only 1.20 pounds per square yard relieves the wearer of the cumbersome burden usually associated with asbestos safety clothing. The famous R/M "SRC" finish provides additional resistance to frictional wear. Leading manufacturers of asbestos safety garments feature R/M No. 24H120 herringbone cloth. This is a typical and exclusive product of R/M research.

R M

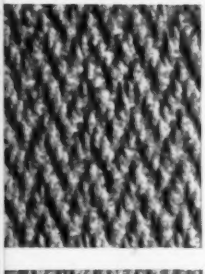
RAYBESTOS-MANHATTAN, INC.

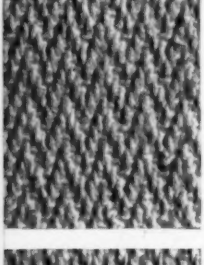
ASBESTOS TEXTILE DIVISION · Manheim, Pa.

FACTORIES: Manheim, Pa.; No. Charleston, S.C.; Bridgeport, Conn.; Passaic, N.J.; Crawfordsville, Ind.

RAYBESTOS-MANHATTAN, INC., Manufacturers of Asbestos Textiles • Teflon Products • Packings • Industrial Rubber Products Abrasive and Diamond Wheels • Brake Linings • Brake Blocks Clutch Facings • Fan Belts • Radiator Hose • Rubber Covered Equipment • Sintered Metal Products • Bowling Balls

SOUTHERN ASBESTOS
HERRINGBONE CLOTHS





Originally designed and developed for safety clothing, Southern's Herringbone Weave Asbestos Cloth has many other uses because of its fine texture and high tensile strength.

Made to prevent excessive ravelling; constructed for maximum resistance; smooth, closely-woven texture—all result in a stronger, more durable cloth. Write for Folder No. 1005.

A COMPLETE LINE OF ASBESTOS TEXTILE PRODUCTS

THREAD • CORD • YARNS • ROPE
TUBING
CARDED FIBRE • LISTING TAPE • WICKING

Southern Asbestos, with over 25 years of specialized experience in developing and manufacturing Asbestos Textiles and Textile Products, will be glad to work with you on problems involving new uses or better uses for asbestos fibres and textiles.

SOUTHERN ASBESTOS COMPANY • CHARLOTTE 1, N. C.